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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/772,176	01/29/2001	James A. Proctor JR.	2479.2071-000	1093
24374	7590	11/20/2007		
VOLPE AND KOENIG, P.C. DEPT. ICC UNITED PLAZA, SUITE 1600 30 SOUTH 17TH STREET PHILADELPHIA, PA 19103			EXAMINER BURD, KEVIN MICHAEL	
			ART UNIT 2611	PAPER NUMBER
			MAIL DATE 11/20/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 09/772,176	Applicant(s) PROCTOR, JAMES A.	
	Examiner Kevin M. Burd	Art Unit 2611	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 July 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,5-22 and 25-42 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-2,5-22,25-42 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

1. This office action, in response to the remarks filed 7/31/2007, is a final office action.

Response to Arguments

2. Applicant's arguments filed 7/31/2007 have been fully considered but they are not persuasive. Applicant states the combination does not disclose the claimed feature: calculating a metric of a modulated signal indicative of motion of at least one of the stations or motion of objects in the signaling path as a function of a change in at least one modulation attribute of the modulated signal. The examiner disagrees. Porter (US 6,977,912) discloses the ability to monitor the channels using the subscriber terminals allows the network to gather spatial information as well. It should therefore be possible to determine interferer location and velocity (column 1, lines 17-10). For this reason, Porter discloses the step of calculating recited in claim 1. Applicant states Porter provides no detail as to how this determination might be done and Porter does not enable a person of ordinary skill in the art to make and use the invention as recited in claim 1. The examiner disagrees. The subscriber terminal described in the invention of Porter carries out this function and is carried out in a processing unit of the terminal. For these reasons and the reasons stated in the previous office action, the rejections of the claims are maintained and stated below.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 2, 5-22 and 25-42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Porter et al (US 6,977,912) in view of Kraiem et al (US 6,370,369).

Regarding claims 1, 2, 21, 22, 41 and 42, Porter discloses a communication system and a method of communicating between a base station and subscriber terminals shown in figure 1. The subscriber terminal monitors a channel and generates one or more channel metrics. The generated metrics are communicated back to the cell access point over a signaling channel and a new frequency is allocated to the cell if it is determined from the metrics that the presently allocated channel is suffering interference (abstract). The subscriber terminal can determine the location and velocity of the interferers (column 11, lines 1-10). Though, Porter discloses the wireless communication network is arranged in a cellular configuration (column 1, lines 12-20), Porter does not disclose the subscriber terminals are mobile. Kraiem discloses a wireless network comprising mobile terminals shown in figure 3. The mobile terminals allow the users to move to various locations throughout a cell as well as being able to directly communicate with one another without using a central station or access point as a repeater (column 1, lines 5-10). For these reasons, it would have been obvious for one of ordinary skill in the art at the time of the invention to combine the subscriber

terminals of Kraiem into the communication system and method of communicating of Porter.

Regarding claims 5-7 and 25-27, Porter further discloses the metrics are computed from the coding gain (column 9, lines 13-27).

Regarding claims 8-13 and 28-33, Porter further discloses the metrics are calculated according to errors in the received transmissions (column 8, lines 30-60).

Regarding claims 14 and 34, Porter discloses the control server will collect the information regarding the calculated metrics and execute frequency reassignment when necessary (column 8, lines 21-24).

Regarding claims 18-20 and 38-40, the modulation attributes measured are disclosed in column 8, lines 30-60.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 15-17 and 35-37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Porter et al (US 6,977,912) in view of Kraiem et al (US 6,370,369) further in view of McNicol et al (US 5,940,454).

Regarding claims 15-17 and 35-37, the combination of Porter and Kraiem discloses the communication system and a method of communicating between a base

station and subscriber terminals stated above. The combination does not disclose changing an antenna mode in response to the metrics. McNicol discloses a receiver, shown in figure 5, responsive to a quality metric that controls the selection of the antenna (abstract). The antennas may be omni directional or sectored (column 9, lines 5-13). McNicol overcomes channel fading and channel distortion (column 3, lines 24-29) to allow the received signals to be received with less errors. For this reason, it would have been obvious for one of ordinary skill in the art at the time of the invention to combine the teaching of McNicol into the communication system of the combination of Porter and Kraiem.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin M. Burd whose telephone number is (571) 272-3008. The examiner can normally be reached on Monday - Friday 9 am - 5 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David C. Payne can be reached on (571) 272-3024. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Kevin M. Burd
11/18/2007


KEVIN BURD
PRIMARY EXAMINER